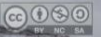




Rebecca Priestley



ICE101x | Antarctica: From Geology to Human History | Syllabus

Welcome to ICE101x

ICE101x is a free, introductory course that lets you explore the continent of Antarctica and more than 500 million years of geological history and 250 years of geographical discovery and scientific endeavour.

Course Description

In this course, you will learn through lectures filmed on location on Ross Island and in the McMurdo Dry Valleys of Antarctica.

Cliff Atkins, an Antarctic veteran, with 13 seasons on the ice, will introduce you to some of our planet's most remarkable landscapes—the Dry Valleys, the Transantarctic Mountains and the world's southernmost volcanic island. At a remote field camp, he interviews fellow geologists studying fossil-rich sediments—from a time when Antarctica was 20°C warmer than today—to see what Antarctica's past climate can reveal about what the future might hold.

Capital thinking. Globally minded.

Rebecca Priestley, a science historian and writer who has written extensively about Antarctica, visits Captain Robert Falcon Scott's huts on Ross Island and interviews conservators from the New Zealand Antarctic Heritage Trust and scientists and logistics staff working at Scott Base and McMurdo Station. You'll learn about the explorers and scientists from around the world who have been drawn to work and sometimes risk their lives here—from James Cook's first venture below the Antarctic Circle, to the British scientists who discovered the ozone hole, to the first women to work on the ice.

What You'll Learn

- A chronology of Antarctic geology and human activities.
- The locations and significance of key geographic features on Ross Island and the Antarctic continent.
- How research is undertaken in Antarctica, both today and at key points in history.
- The role of Antarctic paleoclimate research in understanding present and future climate change including the impact on the Antarctic ice sheet volume and global sea levels.

Course Audience

This course is intended for anyone who is interested in learning about the geology and history of Antarctica and what it's like to work there. Students can engage with the course material at different levels, depending on their personal interest. The lecture videos are suitable for a general audience. Some of the activity readings will need at least a

high school level education, while others are more suited to those with scientific backgrounds.

Course Schedule

The course is broken up into three content modules. The first two modules run across two weeks, while the third runs for one week. All of the course content will be available from the start of the course on 17 October at 1 pm NZ time / 00:00 UTC.

There is also an Introduction module which runs during week one, and a Course Completion module which runs during the final week. These modules contain information for starting and ending the course.

Weeks 1 and 2: Human History of Antarctica

17 October – 30 October 2018

In this module, we go back in time to the 1770s, when the British Naval captain James Cook first circumnavigated the Antarctic continent. We then follow the science done in Antarctica through these early explorations, to the Heroic Age in the early 20th century, to International Geophysical Year (1957 to 58) and beyond.

Weeks 3 and 4: Antarctica Geology

31 October – 13 November 2018

In this module, we examine the extraordinary geological story recorded in the rocks, fossils and landscape. We visit an active research site and

find out what geological research tells us about how Antarctica's climate has changed in the past, when the ice sheets formed and how that knowledge can be used to predict future changes.

Week 5: Antarctica Today

14 November to 20 November 2018

In this module we meet some of today's Antarcticans. At a 2016 conference, we meet natural scientists, social scientists and humanities researchers who study the icy continent. We also join artist Gabby O'Connor on her 2015 fieldtrip to Antarctica.

Course Components

Videos

In this course, you'll mostly learn by watching short **video lectures**. Each week has between 30 min and an hour of videos, broken into short videos between 3 and 8 min long.

Activities

For some of these videos, you'll also be given **activities** to help you delve deeper into the topics which you're interested in. These activities might involve reading book excerpts or blog posts, watching extra videos, or other tasks such as Google Maps walkthroughs.

Most of these activities are intended to be supplementary to the video content, giving extra material for those who are interested, but some

will contribute to the assessment. Due to the nature of some of the activities, such as the Google Maps walkthroughs or third party webpages, visually impaired students might have difficulty navigating or completing them. Those activities which have been identified as having accessibility issues will not contribute to any assessment.

Knowledge Check

At the end of each course section, you'll be given a couple of knowledge check questions about the lectures you've just watched. These are to help you verify you've taken in some of the key points of the lectures. These aren't graded, and you can answer them as often as you want.

Discussion Forum

At several points in the course, you will be invited to respond to questions related to the topic you are learning about. This is an opportunity to discuss and explore this topic in more depth with your classmates. It's perfectly fine to use the discussion questions as departure points for more elaborate conversations with your classmates. Even if you don't want to post your answer in the forums, we encourage you to answer the questions for yourself. We also recommend that you read and [vote up your classmates' posts](#) which contribute well to the discussion.

While the discussion forums will be moderated by Antarctic experts, we won't be able to respond to all posts. Rebecca and Cliff will address some of the more important or interesting topics raised in the forums in weekly blog posts.

The discussion forums will all be available from the start of the course. However, you'll find that the instructors will be mostly focussing on the discussion questions for the **current week of the course**. The discussions will stay open until the end of the course, and you're welcome to keep the discussion going even after the week has passed. You'll probably find them most lively during the right week, though.

Discussion Forum Behaviour Standards

We want our discussion forums to be a fun and interesting part of the course that everyone can be part of. We therefore expect you to behave like you would in a professional environment, such as at work or school. You must adhere to the following standards of behaviour.

- **Respect your fellow students.** We will not tolerate offensive or abusive behaviour towards others in the course.
- **Critique arguments not people.** We encourage lively discussions of the course material, but make sure you respond to what your classmates are saying rather than how they're saying it.
- **Refrain from swearing and offensive language.** There are children taking the course, plus offensive language tends to undermine the points you are making.

- **Don't be a nuisance.** This includes repeatedly posting the same content, continually linking to the same external material (especially if it is your own work), or otherwise being a troll. This kind of behaviour is bothersome to both your fellow students and your instructors.

If you don't follow these rules, your post might be deleted or you may even be removed from the course.

There are also some guidelines for discussion forums which will make it easier for you and others to take part.

- Avoid TYPING WHOLE POSTS IN ALL CAPS. Some people read this as shouting. A few words as emphasis is ok, though
- Use your best spelling and grammar. Some of your fellow students don't have English as their first language, and this helps them to understand you.
- Avoid unnecessary symbols, abbreviated words, texting shorthand, replacing words with numbers, repeating letters or punctuation. Again, this helps others to understand what you're saying.
- If you're using the main discussion board rather than the links that are in with the course content, make sure you label your post with the right topic. It helps us keep things organised and will help keep your post from getting lost.

Assessment

Remember that by enrolling in an edX course, you agree to abide by the [edX honour code](#).

Once you reach the end of each module, you'll be given a **short quiz**.

There are **no set due dates** for these assessments. You are welcome to complete them at any time that suits you before the end of the course on **21 November** at 1 pm NZ time / 00:00 UTC. We have suggested due dates that we think will help you keep on track with the course content.

There are three quizzes during the course.

- The Human History module quiz is at the end of week two. The suggested due date is **Tuesday 30 October** and is worth 40% of the course grade.
- The Geology module quiz is at the end of week four. The suggested due date is **Tuesday 13 November** and is worth 40% of the course grade.
- The Antarctica Today module quiz is at the end of week five. The suggested due date is **Tuesday 20 November** and is worth 20% of the course grade.

Upgrade to a Verified Certificate

Sometimes you want to take a course just for the sheer joy of learning something new. But sometimes you need to complete a course for a better job, a promotion, or a college application. A [verified certificate](#) from edX can provide proof for an employer, school, or other institution that you have successfully completed an online course.

Verified certificates require you to verify your identity using a webcam

and a government-issued ID, so employers and schools know that you completed the course work.

It also helps us at VictoriaX to keep producing quality courses such as this one.

Certificates for ICE101x cost \$49USD. The last day to upgrade to verified is **Monday 12 November 2018.**